

Sandhill Crane (*Grus canadensis*)

(6 subspecies; all within plan area)

Conservation Concern Category:
Low Concern

Population Trend (PT)

G. canadensis canadensis—stable (J. Roberson, pers.comm.)

G. canadensis rowani—stable (Delany and Scott 2002; Meine and Archibald 1996)

G. canadensis tabida—increasing (Delany and Scott 2002; Meine and Archibald 1996);

G. canadensis pratensis—stable (Delany and Scott 2002; Meine and Archibald 1996)

G. canadensis pulla—unknown (Delany and Scott 2002)

G. canadensis nesiotis—increasing (Delany and Scott 2002; Archibald 2001, unpub. info.)

“breeding range in NA formerly more extensive...Cuba population declining...*pratensis* stable...*pulla* increasing...all other subspecies increasing...” (Tacha et al. 1992)

“some local populations may be declining, the total population is increasing...Cuban Sandhill probably more widely distributed in the Cuban archipelago than at present...” (Ellis et al. 1996)

Mid-Continent population, which includes *canadensis* and *tabida* is stable, as is the Rocky Mountain population, made exclusively of *tabida* (see Sharp et al. 2004), recent genetic research has concluded that *rowani* doesn't exist, these birds mostly *tabida* (see Peterson et al. 2002, Johnson et al. 2003, Glen et al. 2002, Rhymer et al. 2001)

In Ontario, after similar field effort, the SACR showed breeding evidence in 3.5 x as many 10 km squares during the second Breeding Bird Atlas 2001-2004 (N=727) as compared to the first Atlas, 1981-1985 (N=210) and it is well known that the breeding status of the species has greatly increased (2nd Ontario Breeding Bird Atlas, in prep.)

On the Great Lakes, for the period 1995 – 2004, Archer and Timmermans (2004) reported non-significant increases in SACRs ranging from 2.9 to 7.8%/yr as determined through their Marsh Monitoring Program (MMP).

Using Canadian BBS data, SACRs showed significant increases of 13.4% per year over the long term (1968-2002) and 9.8% per year over a shorter term (1993-2002)(Downs et al. 2003)

Increasing numbers of this wary bird have been evident in Manitoba over the past 20-30 years, especially in the southeast (MARC 2003).

Canadian Review Team suggests that the PT factor score be 2 based on Canadian data, considering that >70% of the breeding range and population is in Canada.

PT FACTOR SCORE=2

Population Size (PS)

G. canadensis canadensis—unknown (Delany and Scott 2002)

G. canadensis rowani—450,000 total individuals (Delany and Scott 2002; Meine and Archibald 1996)

G. canadensis tabida—65,000-75,000 total individuals (Delany and Scott 2002; Meine and Archibald 1996)

G. canadensis pratensis—4,000-6,000 total individuals (Delany and Scott 2002; Meine and Archibald 1996)

G. canadensis pulla—120 total individuals (Delany and Scott 2002; Meine and Archibald 1996)

G. canadensis nesiotis—650 total individuals (Delany and Scott 2002; Archibald 2001, unpub. info.)

“total population estimate for the species is 652,500-715,300...Cuba population <200 birds...” (Tacha et al. 1992)

“total population at more than 500,000...” (Ellis et al. 1996)

Based on work we have done also taking into account information collected by others, we estimate number of *G. canadensis canadensis* to ~ 400,000+ birds. Estimate of *G. c. rowani* given is much too high. We estimate ~150,000 *rowani*. (G. Krapu, pers.comm.)

One of the Yukon's most spectacular natural events is the migration of over 150,000 Sandhill Cranes [*G.c. canadensis*] through the Tintina Trench in May and September, on their way to and from breeding Grounds in Alaska and Siberia (Sinclair et al. 2003).

PS FACTOR SCORE=2

Threats to Breeding Populations (TB)

“The single, most important factor regulating Sandhill Crane populations is habitat availability. Nesting effort and success, as well as survival of young correlate directly with the amount and quality of nesting habitat... Low annual recruitment rates limit ability to recover from population declines. Wetland conservation

particularly important in ranges of nonmigratory populations..." (Tacha et al. 1992)

"Hunting, agricultural expansion, drainage of wetlands and other habitat changes in the 18th and 19th century led to extirpation of Greater subspecies from many parts of breeding range in the U.S. and Canada..." (Ellis et al. 1996)

"Low recruitment rates also emphasize the need for careful management of the ...population that is hunted. Hunting by natives in Canada and Alaska, and all hunting in Mexico and Siberia, has not been adequately documented" (Tacha et al. 1992).

"habitat loss and fragmentation..."(J. Roberson, pers.comm.)

"suburbanization is a threat to some breeding subpopulations" (Fellows, pers. Comm..)

I know of no areas where recreational hunting in modern times is a threat to the breeding population. Adverse weather conditions currently pose the primary risk to reproductive success but major development of energy resources and other forms of resource extraction and global warming pose potential major risks going forward. Along the southern edge of the breeding range, human activity from residential and other forms of development and agricultural expansion pose significant risks. (G. Krapu, pers.comm.)

Canadian review team suggests that 3 is a more appropriate interpretation of the data for the full species (acknowledging the importance of assessing by subspecies at the regional level.)

TB FACTOR SCORE=3

Threats to Non-breeding Populations (TN)

"Wetland conservation is particularly important in ...staging and wintering areas of migratory populations." (Tacha et al. 1992)

"The agricultural landscape, on which sandhill cranes depend for a portion of their annual cycle, has undergone dramatic changes in recent years. In particular, some areas have experienced changes in the types of crops planted, harvest efficiency has increased, and genetically modified crops are being introduced. ...reduced waste grain availability in the Platte River Valley may impact the distribution and abundance of cranes." (Sharp et al. 2004)

The size of the mid-continent population is regulated by weather and habitat conditions. (L. Roberts, pers.comm.)

"wintering grounds of Lesser and Canadian subspecies have been extensively altered... leading threat is loss and degradation of wetland habitats, especially ecological and hydrological changes in important staging areas...continuing loss of roosting habitat has concentrated birds with increased risks associated with disease, disturbance...overhunting poses a potential threat...lead, mycotoxin poisoning, abnormal predation pressures, and collisions with fences, vehicles, utility lines are of local concern..." (Ellis et al. 1996)

"habitat loss and fragmentation...change in land use from corn to soybeans, reduction in rice acreage along Texas Gulf Coast, and de-watering of the Platte River and Texas High Plains playa lakes are significant threats to the Mid-continent population..."(J. Roberson, pers.comm.)

Massive alteration of wintering and migration habitat have led to major crowding that has increased the risk of disease outbreaks and along with agricultural changes have reduced the capacity of cranes to fatten in preparation for migration and reproduction. Power lines are a significant source of non-breeding mortality. Hunting while an important source of mortality is highly regulated and hunting regulations are subject to change should a decline in population size warrant. Size of the midcontinent population has grown substantially since recreational hunting was implemented in 1961 so a question whether hunting should be listed as a threat beyond possibly noting that it was an important threat in the past before hunting regulations and seasons were established. (G. Krapu, pers.comm.)

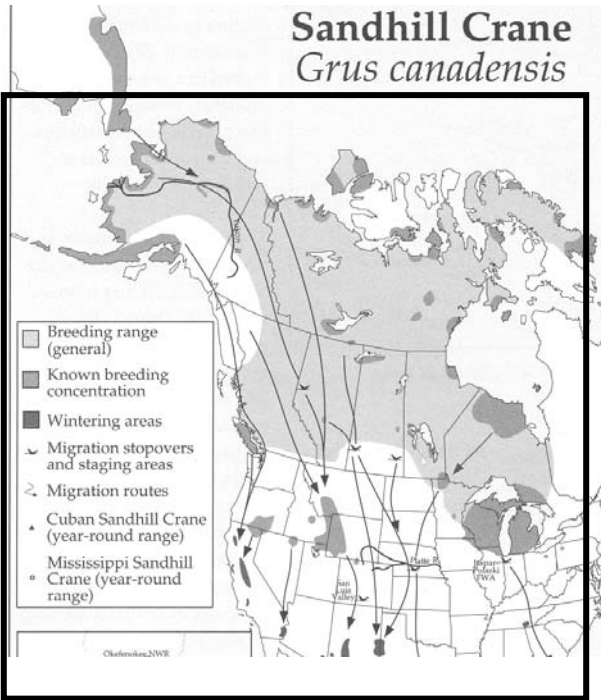
"poaching or unlawful shooting of the smaller resident populations may still be a problem and a risk...however 'regulated legal sport harvest' not a threat due to the ability to manage populations by reducing daily bag limit or season length..."(J. Roberson, pers.comm.)

The point should be made that Mid-continent and Rocky Mountain populations subject to regulated harvest are monitored closely and receive considerable management attention. The greatest threat to both populations is likely changing agricultural practices and wetland habitat loss. (Marshbird Workshop 2005)

Canadian review team suggests that 3 is a more appropriate interpretation of the data for the full species (acknowledging the importance of assessing by subspecies at the regional level.)

TN FACTOR SCORE=3

Global Range (Meine and Archibald 1996; inset=plan area range)



Breeding Distribution (BD)

G. canadensis canadensis—Arctic & subarctic N America & E Siberia (Delany and Scott 2002)

G. canadensis rowani—Subarctic Canada (Delany and Scott 2002)

G. canadensis tabida—Mid-continental NW N America (Delany and Scott 2002)

G. canadensis pratensis—S Georgia, Florida (resident) (Delany and Scott 2002)

G. canadensis pulla—SE Mississippi (Delany and Scott 2002)

G. canadensis nesiotes—Cuba & Is Pines (Delany and Scott 2002)

2,672,200 km² (plan area distribution; estimated from range maps)

G. canadensis tabida—confused by Mid-continental "NW" N America. *tabida* breed from Michigan, Ontario westward to Alberta, Oregon and other western states. (G. Krapu, pers.comm.)

BD FACTOR SCORE=3

Non-breeding Distribution (ND)

G. canadensis canadensis—SW USA, N Central Mexico (Delany and Scott 2002)

G. canadensis rowani—Texas coast, SW USA, N Central Mexico (Delany and Scott 2002)

G. canadensis tabida—N Central Mexico & S USA

G. canadensis pratensis—S Georgia, Florida (resident) (Delany and Scott 2002)

G. canadensis pulla—SE Mississippi (Delany and Scott 2002)

G. canadensis nesiotes—Cuba & Is Pines (Delany and Scott 2002)

"wintering locales in C (vicinity of Cheneyville, long standing) and SW Louisiana (Lacassine NWR, recently established) not shown on accompanying map..." (R. Russell, pers.comm.)

3,848,100 km² (plan area distribution; estimated from range maps)

ND FACTOR SCORE=4

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